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Trends in Biosecurity Measures of Pork Producers

National Animal Health Monitoring System

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Introduction of a swine pathogen into a herd can be devastating. Some diseases result in high mortality, while a chronic, subclinical disease can cause the operation severe economic loss.

The biggest threat is purchased pigs, such as breeding stock or feeder pigs, which may harbor infectious agents. Wildlife, pets, or people can physically carry organisms onto the operation. Occasionally, disease organisms can be carried in or on inanimate objects, such as equipment and feed, or even by the wind.

Whatever the source, the risk is real, and many producers go to great lengths to prevent disease from entering their operation. A highly effective means of keeping disease out of a herd is to isolate new, incoming stock.

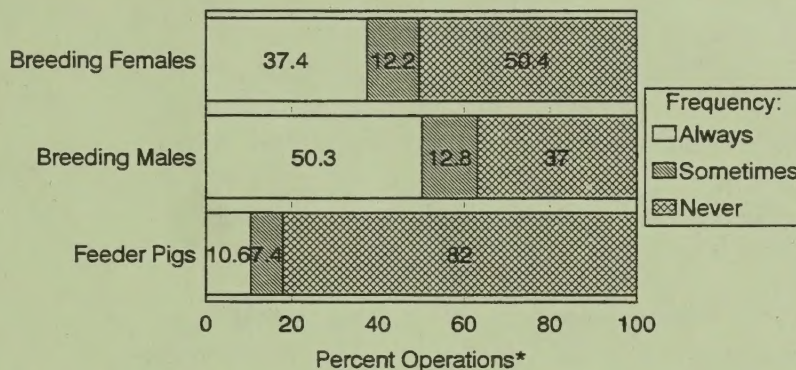
The proportion of pork producers who separated/isolated new breeding animals changed little from 1990 to 1995. In 1990, a study by the USDA's National Animal Health Monitoring System (NAHMS) found that 33.6 and 60.9 percent of all producers said they would separate new breeding females and new breeding males, respectively. These percentages were for *all pork producers* with farrowing sows, whether or not they brought in new hogs (not shown in the above graph).

According to a 1995 NAHMS study for a comparable population, the percentages changed to 36.5 for new breeding females and 57.4 for new breeding males. During the summer of 1995, NAHMS contacted pork producers in 16 states¹ as part of the Swine '95 study. Ninety-one percent of U.S. hog inventory were represented in the study.

Swine '95 results indicated that of the producers most at risk of bringing in infectious agents, those

Figure 1

Percent of Operations* with New Arrivals That Separated or Quarantined New Arrivals by Pig Group



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producers who received new animals, (37.4 percent, always separated and isolated new breeding females (Figure 1). Over 50 percent of producers buying boars always separated and isolated new breeding males.

Feeder pigs can be a source of disease introduction into the grower-finisher unit. A serious outbreak of a disease such as pseudorabies virus (PRV) or porcine reproductive and respiratory syndrome (PRRS) can put the entire feeding operation at risk and threaten the breeding herd as well.

Of those producers who brought in feeder pigs, 10.6 percent always isolated them. Percentages for *all operations*, those who did and did not bring on new stock, were used to assess changes since the 1990 NAHMS study. New feeder pig arrivals were quarantined and isolated on 6.7 percent of the operations in 1995, compared to only 2.1 percent in the 1990 study. The increase in number of producers isolating feeder pigs may be the result of the increased importance of the risk involved due to increased herd

¹ Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Carolina, Ohio, Pennsylvania, South Dakota, Tennessee, and Wisconsin.



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Figure 2

technologies such as all-in,

all-out and site separation make new feeder pig isolation more feasible physically.

For all operations, 35.3 percent of 1995 producers health tested new females using blood or fecal samples, up from 22.3 percent in 1990. Nearly 45 percent of 1995 producers tested new males, representing an increase of 2.8 percent from 1990. The number of producers health testing new feeder pigs rose from 0.8 percent in 1990 to 7.7 percent in 1995.

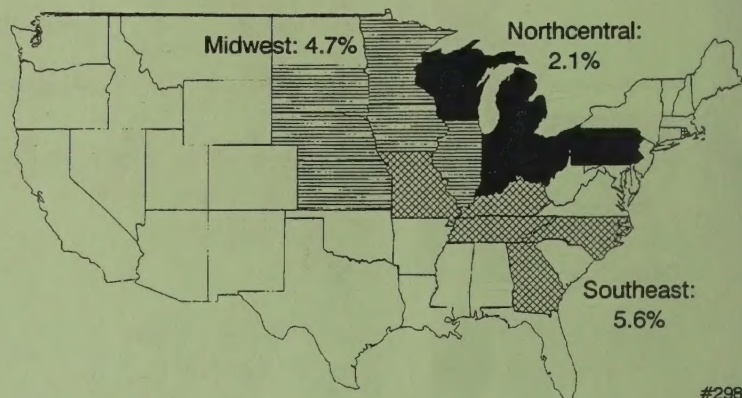
Since feed delivery personnel or livestock haulers travel from farm to farm, they are at high risk of bringing new organisms on the operation. Visitors to swine operations are also considered a risk. The 1995 study indicated 40.5 percent of all operations restricted entry to premises to only employees.

In certain areas of the U.S., feral or wild hogs can be a risk to the domestic pig operation. Pseudorabies, brucellosis and leptospirosis can be spread by feral pigs. Overall, only 4.2 percent of the operations considered feral hogs to be a disease threat to their operation. Figure 2 shows that more producers (5.6 percent) in the southeastern U.S. expressed concern over these animals.

Rodents with access to the pork operation can carry and spread disease organisms that infect pigs. Methods of rodent control include traps, poisons, and cats. Traps were utilized by 14.2 percent of pork producers in 1990 and by 15.9 percent during the 1995 study (Figure 3). Baits or poisons were more common than traps as 78.5 and 79.5 percent of operations used these as rodent controls in 1990 and 1995. Though cats have been suspected of spreading *Mycoplasma pneumonia*, atrophic rhinitis, and toxoplasmosis, they were the most popular form of rodent control in 1990. The percent of operations using cats for rodent control was down from 88.1 percent in 1990 to 71.6 percent in 1995. Research is needed to more definitively assess the risk of cats introducing disease in swine facilities. This was the only method of rodent control that showed a significant change in the 5-year period.

Biosecurity is a critical, continuous management practice for a successful pork operation. All

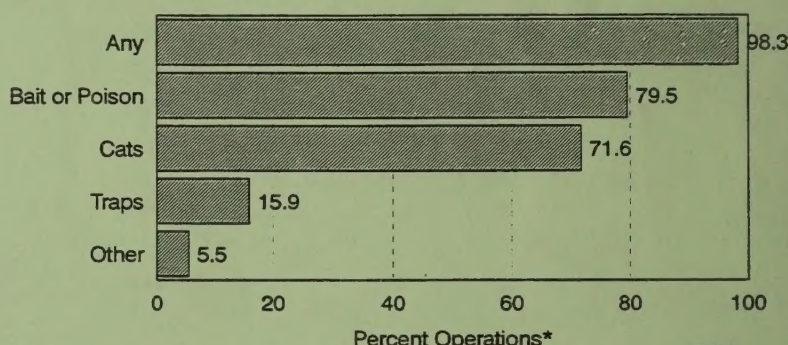
Percent of Operations That Considered Feral or Wild Hogs a Threat to Herd Health by Region



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Figure 3

Percent of Operations* by Regularly Used Rodent Control Measures



*Operations with at least 1 sow.

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employees must be constantly aware of, adhere to, and enforce the strict biosecurity rules of the operation, since any compromise of biosecurity measures could prove disastrous to the operation.

NAHMS collaborators on the Swine '95 study included the National Agricultural Statistics Service (USDA); State and Federal Veterinary Medical Officers and Animal Health Technicians; and the National Veterinary Services Laboratories (USDA:APHIS:VS). For more information, contact:

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